

VERY THIN, LIGHT BIPOLAR PLATES

ABSTRACT

A bipolar plate comprising a fluid barrier and a sealing frame formed around and
5 overlapping the perimeter of the fluid barrier. The fluid barrier is placed in a mold and
then a polymer is injected into the mold, thereby forming the sealing frame around the
fluid barrier such that the sealing frame overlaps the perimeter of the fluid barrier.
Because there are no surfaces to seal between the perimeter of the fluid barrier and the
sealing frame, gaskets or other sealing surfaces are not required. A bipolar plate is
10 further provided comprising a fluid barrier having the perimeter of the fluid barrier
between a preformed cathode sealing frame and an anode sealing frame. The anode and
cathode sealing frames are adapted to receive an overlapped portion of the perimeter of
the fluid barrier. The anode and cathode sealing frames are then bonded together to form
a fluid tight seal.

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